REMARKS

Claims 1-24 are pending in the present application.

Claims 1-24 have been rejected.

Claims 1 and 13 are amended in this response.

Reconsideration of Claims 1-24 is respectfully requested.

In Section 1 of the August 25, 2004 Office Action, the Examiner objected to the abstract for being too long. The Applicant has amended the Abstract herein.

In Section 2 of the August 25, 2004 Office Action, the Examiner objected to Claim 13 due to a misspelling of the word "area". The Applicant has amended Claim 13 at line 3 to change the word "are" to "area".

The Applicant has also amended Claim 1 and Claim 13 to correct an antecedent basis problem in each claim. The phrase "requested call process service" has been changed to "call process service request" in each claim.

In Section 3 of the August 25, 2004 Office Action, the Examiner rejected Claims 1-3, 5-6, 8-10, 12-15, 17-18, 20-22 and 24 under 35 U.S.C. §103(a) as being unpatentable over United Stated Patent No. 6,574,477 to *Rathunde* (hereafter, simply "*Rathunde*") in view of United States Patent No. 6,681,001 to *Clayton et al.* (hereafter, simply "*Clayton*"). In Section 4 of the August 25, 2004 Office Action, the Examiner rejected Claims 4 and 16 under 35 U.S.C. §103(a) as being unpatentable over the *Rathunde* reference in view of the *Clayton* reference and further in view of United States Patent No. 6,134,216 to *Gehi et al.* (hereafter, simply "*Gehi*"). In Section 5 of the August 25, 2004

Office Action, the Examiner rejected Claims 7, 11, 19 and 23 under 35 U.S.C. §103(a) as being unpatentable over the *Rathunde* reference in view of the *Clayton* reference and further in view of United States Patent No. 6,598,071 to *Hayashi et al.* (hereafter, simply "*Hayashi*").

The Applicant respectfully disagrees with the Examiner's rejection of Claims 1-24 and directs the Examiner's attention to Claim 1, which recites the unique and non-obvious limitations emphasized below:

> 1. (Original) A switch capable of handling call connections between calling devices and called devices on a plurality of trunk lines associated with said switch, said switch comprising:
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> a main processing unit capable of executing call process client applications, wherein each of said call process client applications is associated with one of said call connections; and
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> N call application nodes capable of executing call process server applications, wherein a first call process server application is executed on a first one of said N call application nodes and is associated with a similar second call process server application executed on a second one of said N call application nodes separate from said first call application node, said first and second call process server applications thereby forming a first load sharing group server application,
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> wherein said each call process client application sends a call process service request to said first load sharing group server application and said first load sharing group server application selects one of said first and second call process server applications to perform said call process service request according to a load distribution algorithm. (emphasis added)

Applicant respectfully asserts that the above-emphasized limitation are not disclosed, suggested, or even hinted at in the *Rathunde* reference, the *Clayton* reference, or in the combination of the *Rathunde* reference and the *Clayton* reference.

The Applicant disagrees with the Examiner's description of the subject matter disclosed in the *Rathunde* reference. The Examiner asserted that application processor (AP) 32 and application

processor (AP) 34 in Figure 1 and AP 100, AP 102, and AP 104 in Figure 2 are equivalent to the call application nodes recited in Claim 1 and that the radio control software (RSC) instances in AP 32 and AP 34 are equivalent to the first and second call process server applications recited in Claim 1. The Applicant believes that the Examiner may have been confused by the manner in which the terms "primary/active" and "secondary/inactive" are used in the *Rathunde* reference.

The Examiner rejected Claim 1 based on Figures 1 and 2 and the text of the *Rathunde* reference at columns 7 and 8, which purportedly illustrate load sharing between RCS instances. The text in column 7, lines 21-42 of the *Rathunde* reference states:

> The APs 32 and 34 are programmed computers that are interconnected to provide a networked message processing environment. Each AP 32 and 34 represents a network server providing message processing services on behalf of multiple subtending cells, representing network clients. The APs 32 and 34 conventionally includes various layers of software functionality. This functionality includes multiple radio control software instances 60 and 62, respectively, labeled as "Radio Processes" in FIG. 1, and hereinafter referred to as "RCS" instances. There are sixteen RCS instances 60 and 62 respectively running on the APs 32 and 34. Upon system initialization, half of the RCS instances 60 and 62 are operated as primary/active instances, and the other half are operated as secondary/standby instances. As described in more detail below, and as part of the first preferred embodiment of the present invention, the active-standby and primary-secondary designations assigned to the RCS instances 60 and 62 can be dynamically adjusted. This is illustrated in FIG. 1, wherein the AP 32 is shown as having nine active RCS instances and seven standby RCS instances, and wherein the AP 34 is shown as having seven active instances and nine standby instances. (emphasis added)

Additionally, the text of the *Rathunde* reference at column 7, line 66 to column 8, line 32 states:

> To illustrate the dynamic load balancing functionality of the invention, assume in FIG. 1 that the APs 32 and 34 initially each had eight primary/active RCS instances and eight secondary/standby RCS instances. Assume further that one of the

> RCS instances of the AP 34 was the primary/active instance for the cell 6 and that one of the RCS instances of the AP 32 was the secondary/standby instance for the cell 6. According to this example, the signaling channel 54 would have been the active signaling channel for the cell 6, and the signaling channel 52 would have been the standby signaling channel for the cell 6.
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> Assume now that the volume of messaging traffic processing required on behalf of the cell 6 greatly increases as a result of growth, cell re-configuration, or some other factor. Alternatively, assume that some other cell served by an active RCS instance running on the AP 34 experiences an increase in message traffic. In either case, the AP 34 becomes overloaded, whereas the AP 32 remains underutilized.
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> In accordance with the first preferred embodiment of the invention, a dynamic load balancing adjustment can be made to the processing configuration of the APs 32 and 34, such that active RCS processing for the cell 6 is transferred from the over-utilized AP 34 to the under-utilized AP 32. Advantageously, this load balancing adjustment can be performed without taking the APs 32 and 34 offline, and without disabling any RCS instances running thereon, such that all of the cells served thereby remain online. The post-adjustment load balancing condition of the APs 32 and 34 is shown in FIG. 1. The AP 32 is shown as having nine active and seven standby RCS instances and the AP 34 has seven active and nine standby RCS instances. The signaling channel 52 is now the active signaling link for the cell 6, and the signaling channel 54 is now the standby signaling link for the cell 6. (emphasis added)

As the above text illustrates, the workload in one of the application processors 32 or 34 is increased or decreased by shifting workload from an active RCS in one AP to an inactive RCS in another AP. This shifts the entire workload from one RCS instance in one AP to the other RCS instance in the other AP. In the example given, there are initially eight (8) active RCS instances in AP 32 and eight active RCS instances in AP 34. When AP 34 becomes too busy, workload is redistributed to AP 32. After the workload is redistributed, there are nine active RCS instances in AP 32 and only seven active RCS instances in AP 34. As a result, all messages previously sent from cell 6 to AP 34 over signaling channel 54 are instead to AP 32 over signaling channel 52.

This is not what is claimed in Claim 1. In Claim 1, the recited first and second call process server applications reside on different call application nodes and form a first load sharing group server application. The first load sharing group server application distributes received call process service requests to the first and second call process server applications according to a load distribution algorithm. Unlike the RCS instances in the *Rathunde* reference, the first and second call process server applications are both primary applications – neither is a backup for the other. Thus, requests (and workload) are distributed among primaries (i.e., among call process server applications), not from a primary application to a backup application, as the *Rathunde* reference teaches. Although the first and second call process server applications according to the present invention exist as primary-backup groups consisting of a primary call process and a backup call process (see Claims 5 and 9), workload is never distributed as part of a load-sharing operation from the primary call process to the backup call process. The backup call process mirrors the primary call process and becomes active only upon failure of the primary call process.

Thus, Claim 1 recites unique and non-obvious limitations that are not disclosed, suggested or even hinted at in the *Rathunde* reference. Furthermore, the *Clayton* reference does nothing to overcome the shortcomings of the *Rathunde* reference. This being the case, Claim 1 contains subject matter that is patentable over the *Rathunde* reference, the *Clayton* reference, and the combination of the *Rathunde* and *Clayton* references. Although the Examiner did not apply either the *Gehi* reference or the *Hayashi* reference against Claim 1, the Applicant notes that the *Gehi* reference and the *Hayashi* reference also do not overcome the shortcomings of the *Rathunde* reference. This being the

case, Claim 1 contains subject matter that is patentable over the *Rathunde* reference, the *Clayton* reference, the *Gehi* reference and the *Hayashi* reference, either individually or in any combination of two or more of those references.

Furthermore, dependent Claims 2-12 depend from Claim 1 and recite all of the unique and non-obvious limitations recited in Claim 1. Thus, Claims 2-12 are also patentable over the cited prior art references. Also, independent Claim 13 recites limitations that are analogous to the unique and non-obvious limitations recited in Claim 1. This being the case, Claim 12 is patentable over the *Rathunde* reference, the *Clayton* reference, the *Gehi* reference and the *Hayashi* reference, either individually or in any combination of two or more of those references. Finally, Claims 14-24 depend from Claim 13 and recite all of the unique and non-obvious limitations recited in Claim 13. Thus, Claims 14-24 are also patentable over the cited prior art references.

SUMMARY

For the reasons given above, the Applicant respectfully requests reconsideration and allowance of pending claims and that this Application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ***jmockler@davismunck.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK, P.C.

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John T. Mockler
Registration No. 39,775

P.O. Drawer 800889
Dallas, Texas 75380
Phone: (972) 628-3600
Fax: (972) 628-3616
E-mail: *jmockler@davismunck.com*